

ABSTRACT OF THE DISCLOSURE

A method for making a field-effect semiconductor device includes the steps of forming a gate electrode on a semiconductor layer composed of a gallium nitride-based compound semiconductor represented by the formula $\text{Al}_x\text{In}_y\text{Ga}_{1-x-y}\text{N}$, wherein $x + y = 1$, $0 \leq x \leq 1$, and $0 \leq y \leq 1$; and forming a source electrode and a drain electrode by self-alignment using the gate electrode as a mask. A field-effect semiconductor device fabricated by the method is also disclosed.